

This listing of claims will replace all prior versions and listings of claims in the Application.

LISTING OF CLAIMS

1. **(Currently Amended)** A computer implemented method for evaluating a user's information technology skills by having the user complete an examination comprising:

~~presenting one or more examination items to the user, wherein the examination items include a practical exercise and at least one of a multiple choice question and an essay question;~~

~~associating one or more virtual machines with the practical exercise;~~

~~associating an information technology (IT) exercise with one or more of a plurality of virtual machines;~~

~~pre-configuring each of the one or more of the plurality of virtual machines with at least a set of virtual machine files associated with the IT exercise, wherein the set of virtual machine files determines a virtual machine state;~~

~~launching the one or more of the plurality of virtual machines associated with the IT exercise in the virtual machine state using the set of virtual machine files;~~

~~displaying to the user, information that is associated with the IT practical exercise, wherein the information describes a task that the user is instructed to complete, and~~

~~performing the tasks on the set of virtual machine files of the one or more of the plurality of virtual machines, wherein the performed tasks place the one or more of the plurality of virtual machines into a new state, and wherein the plurality of virtual machines are configured to run an operating system, wherein the user uses one or more of the virtual machines to complete the task; and~~

~~launching the one or more virtual machines so that the user can use the virtual machines to perform the task, wherein the one or more virtual machines are configured to run an operating system~~

2. **(Currently Amended)** The method of claim 1, further comprising:
setting a timer to expire after a certain amount of time has elapsed;
waiting for the user to complete the ~~practical-IT~~ exercise and/or for the timer to expire; and
evaluating how well the user performed the practical exercise.

3. **(Currently Amended)** The method of claim 2, wherein the act of evaluating how well the user performed the ~~practical-IT~~ exercise comprises comparing examining the new state with a benchmark. ~~into which the user put one of the one or more virtual machines and comparing the state to a benchmark.~~

4. **(Currently Amended)** The method of claim 2, wherein ~~each of the virtual machines comprises a disk image file, and the task~~ requires the user to modify a particular file of the set of virtual machine files. ~~stored within one of the disk image files.~~

5. **(Currently Amended)** The method of claim 4, wherein the act of evaluating how well the user performed the ~~practical-IT~~ exercise comprises examining the modifications made to the particular file to determine whether the particular file was modified correctly.

6. **(Currently Amended)** A computer implemented method for evaluating a user's information technology skills, comprising:

accessing a test file comprising one or more exam items;
presenting one or more exam items to the user, wherein the examination items include at least one of an practical-information technology (IT) exercise, a multiple choice question, and an essay question, and wherein the IT exercise is associated with one or more of a plurality of virtual machines;
selecting one of the one or more exam items;
determining whether the selected exam item is an practical-IT exercise; and
~~presenting the selected exam item to the user, wherein, if the selected exam item is determined to be a practical exercise, then the act of presenting the selected exam item~~

~~to the user comprises launching, if the selected exam item is an IT exercise, the one or more of the plurality of virtual machines associated with the IT exercise and that are each pre-configured with at least a set of virtual machine files associated with the IT exercise, wherein the set of virtual machine files determines a virtual machine state, and to wherein the plurality of virtual machines run an operating system and are associated with the practical exercise,~~

~~displaying to the user, information that is associated with the IT exercise, wherein the information describes tasks that the user is instructed to complete, and~~

~~performing the tasks on the set of virtual machine files of the one or more of the plurality of virtual machines wherein the performed tasks place the one or more of the plurality of virtual machines into a new state, and~~

~~presenting and, if the selected exam item is determined to be at least one of a multiple choice question and an essay question, presenting the exam item to the user and waiting for a user response.~~

7. **(Currently Amended)** The method of claim 6, further comprising:
setting a timer to expire after a certain amount of time has elapsed;
waiting for the user to complete the exercise and/or for the timer to expire; and
evaluating how well the user performed the ~~practical~~ IT exercise.

8. **(Canceled)**

9. **(Currently Amended)** The method of claim 7, wherein ~~each of the one or more virtual machines comprises a disk image file, and the tasks~~ requires the user to modify a particular file of the set of virtual machine files, ~~stored within one of the one or more disk image files.~~

10. **(Currently Amended)** The method of claim 9, wherein the act of evaluating how well the user performed the ~~practical~~ IT exercise comprises examining the modifications made to the particular file to determine whether the particular file was modified correctly.

11. **(Currently Amended)** The method of claim 9, wherein the act of evaluating how well the user performed the ~~practical~~IT exercise comprises examining a file that ~~the~~ was not supposed to be modified in performing the ~~practical~~IT exercise.

12. **(Currently Amended)** An information technology skills evaluation system, comprising:

a storage medium;

a first software application stored on the storage medium for allowing multiple virtual machines to run on a single computer system, wherein the virtual machines are configured to run an operating system;

a second software application stored on the storage medium and configured to present one or more exam items to a user, wherein the exam items include an information technology (IT) ~~practical~~ exercise and at least one of a multiple choice question and an essay question, and wherein one or more of the multiple virtual machines are associated with the IT exercise;

~~a disk image file stored on the storage medium, the disk image file being associated with a virtual machine that is associated with the practical exercise; and~~

a set of virtual machine files stored on the storage medium and associated with the IT exercise and the one or more of the multiple virtual machines, wherein the set of virtual machine files determines a virtual machine state associated with the IT exercise;

a processor for executing the first and second software applications, wherein the second software application is operable to:

launch the one or more of the multiple virtual machines associated with the IT exercise in the virtual machine state using the set of virtual machine files;

display to the user, information that is associated with the IT exercise, wherein the information describes tasks that the user is instructed to complete, and

allow the user to perform tasks on the set of virtual machine files of the one or more of the multiple virtual machines, wherein the performed tasks place the one or more of the multiple virtual machines associated with the IT exercise into a new state.

~~display to the user information that is associated with the practical exercise;~~
~~wherein the information describes a task associated with the practical exercise; and~~
~~launch the virtual machine so that the user can use the virtual machine to perform~~
~~the task.~~

13. **(Currently Amended)** The system of claim 12, wherein the second software application is further operable to:

set at timer to expire after a certain amount of time has elapsed;
wait for the user to complete the ~~practical~~IT exercise and/or for the timer to expire; and
evaluate how well the user performed the ~~practical~~IT exercise.

14. **(Original)** The system of claim 12, wherein the second software application comprises a test driver and a practical skills testing module (PSTM).

15. **(Currently Amended)** The system of claim 14, wherein the test driver is operable to:

read a test file that comprises the one or more exam items;
select an exam item;
determine whether the selected exam item is associated with the ~~practical~~IT exercise;
provide an exam item identifier to the PSTM if it is determined that the exam item is associated with an IT ~~practical~~ exercise, wherein the exam item identifier identifies the selected exam item; and
wait for a response from the PSTM after providing the exam item identifier to the PSTM.

16. **(Currently Amended)** The system of claim 14, wherein the second software application displays the virtual machines in a testing window provided by the test driver.

17. **(Currently Amended)** An information technology (IT) skills evaluation system for evaluating a user's IT skills, comprising:

a test file comprising one or more exam item, wherein the one or more exam items include an IT-practical exercise and at least one of a multiple choice question and an essay question, and wherein the ~~practical~~IT exercise is associated with one or more of a plurality of virtual machines;

a storage medium that stores a set of virtual machine files associated with the IT exercise and the one or more of a plurality of virtual machines, wherein the set of virtual machine files determines a virtual machine state associated with the IT exercise;

an exam item presenter that presents the one or more exam items to the user, wherein the exam item presenter comprises a virtual machine launcher that launches the one or more of the plurality of virtual machines in the virtual machine state when the ~~practical~~IT exercise is presented to the user, wherein the one or more virtual machines are configured to run an operating system; and

a display that displays to the user, information that is associated with the IT exercise, wherein the information describes tasks that the user is instructed to complete;
and

an exercise evaluator that evaluates how well the user performed the ~~practical~~IT exercise.

18. **(Canceled)**

19. **(Currently Amended)** The system of claim 17~~8~~, wherein the exercise evaluator evaluates how well the user performed the ~~practical~~IT exercise by examining at least one of the ~~disk image files~~ virtual machine files.

20. **(Currently Amended)** The system of claim 19, wherein in examining the at least one ~~disk image file~~ virtual machine file the evaluator checks a predetermined file stored within the ~~disk image file~~ set of virtual machine files to determine whether the user modified the file correctly.

21. **(Currently Amended)** A computer program product for evaluating a user's information technology skills by having the user complete an examination, the computer program product being embodied in a computer readable medium and comprising computer instructions for:

associating an information technology (IT) exercise with one or more of a plurality of virtual machines;

pre-configuring each of the one or more of the plurality of virtual machines with at least a set of virtual machine files associated with the IT exercise, wherein the set of virtual machine files determines a virtual machine state;

~~presenting one or more examination items to the user, wherein the examination items include a practical exercise and at least one of a multiple choice question and an essay question;~~

~~associating one or more virtual machines with the practical exercise;~~

launching the one or more of the plurality of virtual machines associated with the IT exercise in the virtual machine state using the set of virtual machine files;

displaying to the user, information that is associated with the ~~practical~~IT exercise, wherein the information describes a task~~s~~ that the user is instructed to complete, and

performing the tasks on the set of virtual machine files of the one or more of the plurality of virtual machines wherein the performed tasks place the one or more of the plurality of virtual machines into a new state, and wherein the plurality of virtual machines are configured to run an operating system, wherein the user uses one or more of the virtual machines to complete the task; and

~~launching the one or more virtual machines so that the user can use the virtual machines to perform the task, wherein the one or more virtual machines are configured to run an operating system.~~

22. **(Currently Amended)** The computer program product of claim 21, further comprising computer instructions for:

setting a timer to expire after a certain amount of time has elapsed;

waiting for the user to complete the ~~practical~~IT exercise and/or for the timer to expire; and

evaluating how well the user performed the ~~practical~~IT exercise.

23. **(Currently Amended)** The computer program product of claim 22, wherein the computer instructions for evaluating how well the user performed the ~~practical~~IT exercise comprises computer instructions for ~~examining~~ comparing the new state with a benchmark ~~into which the user put one of the one or more virtual machines and comparing the state to a benchmark.~~

24. **(Currently Amended)** The computer program product of claim 22, wherein ~~each of the virtual machines comprises a disk image file, and the tasks~~ requires the user to modify a particular file of the set of virtual machine files ~~stored within one of the disk image files.~~

25. **(Currently Amended)** The computer program product of claim 24, wherein the act of evaluating how well the user performed the ~~practical~~IT exercise comprises computer instructions for examining the modifications made to the particular file to determine whether the particular file was modified correctly.

26. **(Currently Amended)** A computer program product for evaluating a user's information technology skills, the computer program product being embodied in a computer readable medium and comprising computer instructions for:

accessing a test file comprising one or more exam items;

presenting one or more exam items to the user, wherein the exam items include at least one of an information technology (IT) ~~practical~~ exercise, a multiple choice question, and an essay question and wherein the IT exercise is associated with one or more of a plurality of virtual machines;

selecting one of the one or more exam items;

determining whether the selected exam item is an IT ~~practical~~ exercise; and

~~presenting the selected exam item to the user, wherein, if the selected exam item is determined to be a practical exercise, then the act of presenting the selected exam item to the user comprises launching , if the selected exam item is an IT exercise, the one or more of a plurality of virtual machines associated with the IT exercise and that are each pre-configured with at least a set of virtual machine files associated with the IT exercise, wherein the set of virtual machine files determines a virtual machine state, and to wherein the plurality of virtual machines run an operating system and are associated with the practical exercise,~~

displaying to the user, information that is associated with the IT exercise, wherein the information describes tasks that the user is instructed to complete, and

performing the tasks on the set of virtual machine files of the one or more of the plurality of virtual machines wherein the performed tasks place the one or more of the plurality of virtual machines into a new state, and

presentingand, if the selected exam item is determined to be at least one of a multiple choice question and an essay question, ~~presenting~~the exam item to the user and waiting for a user response.

27. **(Currently Amended)** The computer program product of claim 26, further comprising computer instructions for:

setting a timer to expire after a certain amount of time has elapsed;
waiting for the user to complete the exercise and/or for the timer to expire; and
evaluating how well the user performed the ~~practical~~IT exercise.

28. **(Canceled)**

29. **(Currently Amended)** The computer program product of claim 26, ~~wherein each of the one or more virtual machines comprises a disk image file, and the tasks requires the user to modify a particular file of the set of virtual machine files, stored within one of the one or more disk image files, and wherein the computer instructions for evaluating how well the user performed the practical~~IT exercise comprises computer

instructions for examining the modifications made to the particular file to determine whether the particular file was modified correctly.

30. **(Currently Amended)** The computer program product of claim 29, wherein the act of evaluating how well the user performed the ~~practical~~IT exercise comprises examining a file that ~~the~~ was not supposed to be modified in performing the ~~practical~~IT exercise.

31. **(Canceled)**

32. **(Currently Amended)** The method of claim 1, wherein the one or more of the plurality of virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

33. **(Currently Amended)** The method of claim 6, wherein the one or more of the plurality of virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

34. **(Previously Presented)** The system of claim 12, wherein the virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

35. **(Currently Amended)** The system of claim 17, wherein the one or more of the plurality of virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.

36. **(Currently Amended)** The computer program product of claim 21, wherein the one or more of the plurality of virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine

that is configured to run a second operating system different from the first operating system.

37. **(Canceled)**

38. **(Currently Amended)** The computer program product of claim 26, wherein the one or more of the plurality of virtual machines include a first virtual machine that is configured to run a first operating system and a second virtual machine that is configured to run a second operating system different from the first operating system.